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CALIFORNIA FOOD INDUSTRIES--THEIR ECONOMIC IMPORTANCE

by

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I. Introduction

The resolution initiating the current inquiry into the general subject referred to as "Chemicals in Food Products" (H. Res. 323, 81st Cong., 1st sess.) reads in part as follows:

> "The committee is authorized and directed to conduct a full and complete investigation and study of--
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> "(1) the nature, extent, and effect of the use of chemicals, compounds, and synthetics in the production, processing, preparation, and packaging of food products to determine the effect of the use of such chemicals, compounds, and synthetics (A) upon the health and welfare of the Nation and (B) upon the stability and well-being of our agricultural economy;
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> "(2) the nature, extent, and effect of the use of pesticides and insecticides with respect to food and food products, particularly the effect of such use of pesticides and insecticides upon the health and welfare of the consumer by reason of toxic residues remaining on such food and food products as a result of such use; and
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> "(3) the nature, effect, and extent of the use of chemicals, compounds, and synthetics in the manufacture of fertilizer, particularly the effect of such use of chemicals, compounds, and synthetics upon (A) the condition of the soil as a result of the use of such fertilizer, (B) the quantity and quality of the vegetation growing from such soil, (C) the health of animals consuming such vegetation, and (D) the quantity and quality of food produced from such soil, and (E) the public health and welfare generally."

The committee, in accordance with the resolution, has heard very substantial testimony relating to the technical aspects of "Chemicals in Food Products," such as phases of agronomy, toxicology, physiology, entomology and parisitology, nutrition and biochemistry. Such matters are directly pertinent to the subject of the resolution and merit full consideration.

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Yet, the resolution also refers to "the effect ... upon the stability and well-being of our agricultural economy," which also merits adequate consideration.

This statement is directly concerned with certain economic aspects of the food industries. Our objective is to indicate the economic importance of the various agricultural industries engaged in providing food products for our economy. In that manner, we shall lay the basis for integrating "the stability and well-being of our agricultural economy" with the general subject of "Chemicals in Food Products." Also, we shall indicate the economic nature of the agricultural industries affecting, as well as affected by, the use of chemicals in food products. At this point, two qualifying comments are in order.

First, we may note that what is referred to as "the stability and well-being of the agricultural economy" is closely related to the stability and well-being of the general national economy, and for some industries the international economy is of high significance. In terms of "stability and well-being," the agricultural economy cannot logically or effectively be divorced from the economy at large. Developments in the agricultural sphere of our economy affect and are affected by developments in the nonagricultural sphere. Both the agricultural and nonagricultural areas are highly interdependent, and the "stability and well-being" of one area is a function of "the stability and well-being" of the other area. This is particularly characteristic of the agricultural economy of California since it is highly integrated with the general economy of the rest of the state and that of the nation. How this close interconnection comes about will be developed in more detail in some points we shall note subsequently.

The second qualifying comment is that this statement is oriented to and--in primary emphasis--is limited to economic aspects of the agricultural food industries in California. This may be a limitation for some purpose but has advantages for the objective at hand. The agricultural food industries in California may well be viewed as a case study for the general subject being considered by the committee. The wide differences in natural conditions, including soils and climate, and the wide diversity in food crops produced in the state, as well as the many different types of food-producing, packing, and processing industries, suggest that many of the questions associated with "Chemicals in Food Products" are to be found at one place or another in the California food industries. Although the situation in this state may not serve fully as an adequate basis for generalization, California food production and processing industries well serve as a fruitful and informative case study.

In this statement on some of the relevant economic aspects of the California food industries, we shall first note in broad terms some general characteristics of California agriculture. Next, we shall consider the production-marketing aspects of various food industries in the state. Thirdly, we shall sketch the status of some economic indicators which outline the direct and indirect relation and importance of the California food industries to the general economy of the state and nation. Finally, we shall briefly review national food consumption trends, note their relation to food industry developments, and consider their relation to "the stability and well-being of our agricultural economy." Such procedure will provide materials for integrating the economic and noneconomic phases of the inquiry so as to give a basis for evaluating the effects of "Chemicals in Food Products" upon the stability and well-being of not only our agricultural economy but also of our general economy.

II. Characteristics of California Agriculture and Food Industries

With only about 5 per cent of California's population living on farms,[1] the state, nevertheless, is a leader in cash receipts from farm marketings, in recent years exceeding even such agricultural areas as Texas, Iowa, and Illinois.[2] California's position as a leading agricultural producer has come about through the development of reclamation and irrigation projects, and the application of technological know-how to agricultural production in a highly intensive manner.

With the development of irrigation, large parts of California have been transformed from desert or sparsely grazed stock ranges to intensively cultivated areas. As early as 1890, some 1 million acres were under irrigation, but that was only the beginning. Recent estimates indicate that approximately 6 million acres are now irrigated.[3] This amounts to about one-third of the irrigated acreage in the United States.

The extensive irrigation developments in California are significant for our purpose not only because they permitted expanded agricultural production, they also represent the investment of many millions of dollars and provide the basis for a good deal of the wealth, employment, and income generated in the state.

The intensive and advanced methods of farming practices have played a role in causing as much as 10 per cent of the nation's cash receipts from farm marketings of crops and 7.5 per cent from livestock and products to go to California farmers.[4] Total cash receipts from farm marketings in the state rose sharply from $672,956,000 in 1940 to $2,194,507,000 in 1946.[5] Price declines in various fruits and vegetables kept the state's farm receipts below that level in subsequent years, although for the country as a whole farm income continued to rise through 1948. In 1950 cash receipts

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1/ References and data sources are noted on pages 21-24, where each source is numbered to correspond with the reference number in the text. Selected statistical data are summarized in the tables beginning with page 25.

by California farmers was $2,160,440 with $1,415,840 from crops and $744,600,000 from livestock and livestock products.[6] A point to note here is that the state's farm income position is sensitive to fluctuations in the returns from crops, fruits and vegetables.

In terms of farm value, California produces more than a third of the commercial fruits (fresh and processed use), nearly a fourth of the commercial vegetables (fresh and processed use), and nearly two-thirds of the commercial tree nut output of the country as a whole.[7] California alone accounts for most of the nation's production of lemons, almonds, avocados, walnuts, olives, dates, figs, apricots, grapes, plums, and prunes.[8] With our large production of fruits and vegetables, there are processing industries which provide about one-third of the nation's supply of canned fruits and vegetables[9] and more than 85 per cent of its wine output.[10] California is one of the leading producers of crops such as oranges, hops, barley, alfalfa, sugar beets, lettuce, asparagus, tomatoes, beans, carrots, spinach, melons, potatoes, cotton, and rice.[11] In physical terms, our crop pattern is deficient only in the major staples such as corn, wheat, oats, grain sorghums, and tobacco.

With respect to livestock and livestock products, California is physically deficient in beef cattle, hogs, chickens, horses, and mules, and slightly so in milk and eggs. Only in wool, sheep and lambs, turkeys, and honey does California rank high in production of livestock and livestock products. This does not mean, however, that the state does not have considerable livestock industries. Cattle and calves, during the past ten years, have increased from about 2.3 million to about 2.9 million,[12] and quality has improved. Dairy cattle have increased from about 1.2 million to about 1.5 million,[13] and the quantity of milk produced per cow has increased during the past decade. Even more sharp has been the expansion in poultry

raising. Chickens on farms rose from about 15.3 million in 1940 to about 23.3 million at the beginning of 1951,[14] while the number of turkeys raised about doubled during the past decade.[15] Egg production increased from almost 147 million dozen in 1940 to a rate of about 270 million dozen in 1950.[16] Hence, it is clear that if not a national leader in some of the livestock and livestock products, California does very substantial farm operations in those products. The relative importance of the crops and livestock industries in the state is indicated by the fact that in 1950 some 65 per cent of the California cash receipts from farm marketings is accounted for by crops, and some 35 per cent is accounted for by livestock and livestock products.[17]

The preceding brief sketch of some of the characteristics of California agriculture and its food-producing industries has dealt with broad, general aspects. It is pertinent here to re-emphasize certain features which have been implied earlier and some of which will be considered in more detail later. California agriculture and its food-producing industries cover a wide and diversified range of activities. They include the following industry groupings: tree fruits and nuts; vine and bush fruits, truck crops; field crops; animals, large and small; animal products, such as dairy and milk, meats, hides, honey. Mention may also be made of the floriculture and nursery stock products, although they are not of direct concern here.

Another feature to note is that many of the products are of multiple use; they are harvested and shipped fresh, canned, frozen, dried and preserved. This means that the state's agricultural economy encompasses highly developed food processing industries. The diversity of products and the interrelations of supply, demand and price among the alternative outlets, coupled with long distance from major consuming centers, makes for

a complicated economic structure. Marked changes or adjustments in certain parts of the agricultural industry structure make for changes in other parts of the structure and also lead to repercussions on the economy in general.

III. Trends in Farm Production and Yields

Recognizing the interdependent relations existing within the agricultural industries and between them and the rest of the economy, we may now consider in more detail the trends in farm production by some major commodity groupings. Such a view is in order here to indicate how production is influenced by yields, which in turn are affected by the use of chemicals as well as other influences.

Field Crops.--In 1950, over 6.5 million acres of field crops were harvested to obtain in excess of 15 million tons of products which had a farm value of almost 675 million dollars.[18] Compared with the prewar average (1936-1940), harvested acreage of field crops had increased about 23 per cent, while production had increased over 50 per cent. The relatively greater increase of production reflects the improved yields experienced.

During the past four decades, both the harvested acreage and production of California field crops have tended to increase, with a considerably greater advance occurring in the past decade and a half.[19] But production has tended to advance relatively more than acreage due to the upward trend in yields. This tendency for improved yields has resulted from many influences, including better farming practices and management, but recognition must adequately be given to the use of fertilizers, insecticides, pesticides, and similar substances necessary in the obtaining and maintaining of satisfactory yields.

Truck Crops.--The acreage and production of California truck crops in 1950 were at high levels, with acreage amounting to 728,100 acres and production being 5,462,000 tons. The total farm value was 338,070,000

dollars.[20] In the state's truck crops, in the aggregate, there has been a rising trend over the years in both acreage and production.[21] During the past decade, production has advanced considerably more than has harvested acreage, reflecting substantial gains in output per acre. Here, again, the improved yields are in part a resultant of intensive use of pest, insect, and disease controls.

Fruits and Nuts.--The farm commodities of fruits and nuts are another group of agricultural products which are economically important to California and in which the state is the leader. In 1950 California farmers produced as much as 6-1/3 million tons of fruits and nuts from about 1.4 million acres. And this production represented a return to producers of almost 500 million dollars.[22] Although bearing acreage of fruits and nuts has increased only relatively slightly during the past several decades, production has tended to follow a trend increasing more than that of acreage.[23] Here, also, as in truck crops and field crops, the relatively greater increase in production has reflected a rising trend in yields.

The above brief comments pertain to the several broad commodity groups. The data are available and we might look at the trends for many individual farm products, but such details are not necessary for our purposes. The evidence is strong and clear that California's complicated but expanding agricultural production industries have experienced increased production, and a relatively significant proportion of the expansion is due to an upward trend in yields per acre farmed and harvested. Those increased yields, in turn, have been influenced by the use of controls over insects, pests, diseases, and similar causes of destruction. Without such controls, there would exist greater barriers to the maintenance and expansion of farm production which could well lead to adverse effects on the agricultural economy and the general economy as well.

The tie-in between the food industries of California and the general economy is well indicated by reference to the situation in fruits, nuts, and vegetables, both fresh and processed. The state of California, in terms of farm value of production, accounts for about 45 per cent of the national total for all fruits and tree nuts, about 30 per cent of the national total of all truck crops.[24] For the fresh market, the state produces near one-third of the national total of truck crops.[25]

Turning to canned fruits and vegetables, California in 1950 packed over one-half (53 per cent) of the total canned fruits, 18 per cent of the canned vegetables, and about 10 per cent of the canned juices.[26] As an over-all average, the state in 1950 accounted for 25 per cent of the national pack of canned fruits, vegetables, and juices.[27] The large bulk of these canned products, amounting to over 71 million cases[28] (actual), was shipped to other states and many of the products were exported. It is clear that without the national market the state could not have successfully marketed the pack; and it is equally clear that without the California pack the national market demand would not have been satisfied. The existence of the California fruit and vegetable industries at their current levels of operation, both fresh and processed, depends upon the production and sale to out-of-state markets of large quantities of their products. And those products must be produced, packed, and sold cheaply enough so as to be absorbed by the distant markets and, yet, yield sufficient returns to farmers, processors, and shippers so that they will continue their operations and expand their output to satisfy consumption demands.

IV. Some More Economic Indicators

We have so far sketched some of the general features of the California food industries and indicated how their successful operations are dependendent upon efficient production and marketing and how they are closely tied in

with the rest of the economy. But another aspect of the California food industries is also important, and, that is, how they participate in the creation and generation of wealth and income not only for themselves but also for other groups in the state and nation.

Although the economic importance of the California food industries is widely recognized in some circles in the state itself, and also at the national level in various activities such as fruits, nuts, and truck crops, it is pertinent that we here outline some significant features for those who have other major interests. Such an objective, to be attained in adequately brief and clear terms, must draw upon various economic indicators of importance. There are a substantial number of such measures available. We have already mentioned acreage, volume of production, and value of farm production. But other indicators are also significant such as business establishments, employment, creation of labor payrolls, transportation, and other services. Let us now briefly look at several such economic indicators.

Business Establishments.--The number of business establishments associated with the production and merchandising of food products involves firms at the farm level on through the distribution pipe line to the retailer who sells directly to consumers. Although a complete accounting of the number of such firms at the various levels of distribution has not been attempted, data have been developed for particular segments of the production-distribution pipe line.

According to the 1950 Census of Agriculture, in 1950 there were in California 137,137 farms.29/ In passing, it may be noted that California is one of the only three states which had more farms than a decade earlier. Since the complete data for the 1950 Census of Agriculture have not yet been published, we must draw upon the 1945 Census of Agriculture for

additional data. In that year, some 49,160 farms were classified to be producing and selling fruits and nuts, and some 6,337 were classified as vegetable farms; hence, about 40 per cent of the state's total number of farms were engaged in the production and sale of fruits, nuts, or vegetables.[30] Available evidence suggests that the current number of California farms now producing fruits, nuts, or vegetables is not much different from the most recent data available.

Once the farm products are produced they must be prepared for market. They may be shipped fresh or processed. Both the fresh shipping and processing industries loom large in the economy of the state. Let us first look at the former.

The packing and shipping of fresh fruits and vegetables is a large-scale operation. Approximately, 2,000 fresh fruit and vegetable packers and shippers operate in the state.[31] Some are interested in packing as well as shipping, while others are primarily shippers, brokers, or agents.

Close to 170 packing houses in the state pack and ship fresh peaches, Bartlett pears, or plums.[32] In the important apple-producing area of Sebastopol, there are 11 major apple packers;[33] in the Watsonville area, another important apple territory, there are about 20 apple packers. Approximately, 17 houses in the state pack fresh apricots.[34] For citrus, there are about 270 packing houses.[35] There are about 65 vegetable packing sheds in the Salinas-Watsonville-Hollister area[36] and in excess of 200 vegetable packing sheds in the state.[37] Complete data on the number of packing houses of other products are not available, although it is known that some large growers pack and ship on their own account. The intermixture of production and marketing, or growing, packing and shipping, results in a complicated network of economic operations.

Looking at the food processing industries involved in the canning or freezing of California vegetables and deciduous fruits, we find about 200 separate plants.[38] They are located in or near the centers of agricultural production. These plants represent a current value of about 645 million dollars for land, buildings and machinery.[39] In addition, there are about 20 citrus processing plants[40] which represent substantial investment. Brief mention may also be made of the many wineries[41] and the various dried fruit plants. All of these packing and processing plants not only purchase their products from farms but also provide employment for thousands of workers.

Employment and Payrolls.--In recent years, total man-hour employment in producing and preparing for market of California fresh fruits and vegetables totaled about 190 million man-hours, with fresh fruits accounting for nearly 115 million man-hours and fresh vegetables accounting for about 75 million man-hours.[42] Seasonal activities are characteristic of employment in the processed as well as the fresh-shipping industries.

In the canning and freezing operations, employment in 1950 rose from a seasonal low of somewhat over 20,000 in January to a seasonal peak of about 88,000 in September.[43] There were involved many types of skills, including administrative, clerical, production, and maintenance workers in the canning and freezing plants.

The above figures pertain to particular segments of the food industries in the state, namely, fruits and vegetables. But when we look at the overall employment in agriculture, forestry, and fishing, the number of people involved becomes even more impressive. The reported estimated 1950 civilian employment (including wage and salary workers, employers, own-account workers, and unpaid family workers) for the agriculture, forestry, and fishing industries in California rose from a seasonal low of 344,000 in March to a seasonal peak of 516,000 in October.[44]

The employment in the food industries reflects the creation of labor payrolls. Although complete data are not readily available, there is considerable evidence on the payroll-creating activities of the food industries in the state. For fresh fruits and vegetables alone, the payroll for producing, harvesting, hauling to sheds, and in the case of fresh vegetables also field packing, in recent years has been in the neighborhood of 160-165 million dollars annually.[45] In addition, there are the payrolls for employment in the fruit and vegetable canning and freezing operations, and they have been estimated to total about 122 million dollars annually for the past year or two.[46] Substantial but unknown payrolls also come from citrus processing, dried fruits and nuts. Hence, for fruits, vegetables, and nuts, total of fresh shipping and processed, the annual employment payroll may conservatively be estimated to be near 200 million dollars. In some areas, these industries are the primary economic activities which support the communities; and in other areas these industries are essential if not the only ones.

Transportation.--The California food industries in general rely heavily on out-of-state markets which are spread over the nation. Transportation, therefore, is a significant feature of our marketing. Transportation also serves as a meaningful example of how employment, income and service trades are built around and based on our agricultural industries. Railroads, trucking companies, and water transport are involved.

In the past several years, California fresh deciduous fruit and grape shippers paid about 35 million dollars annually to the railroads,[47] and, in addition, other substantial amounts were paid to truckers. California fresh vegetable and melon shippers have been paying about 65 million dollars annually to railroads.[48] The transportation costs on fresh citrus from the California-Arizona area amounted to 51.2 million dollars for the

1949-1950 season.[49] The combined total of these figures, which apply only to fresh fruits and vegetables, aggregate to over 151 million dollars each year. And it must be noted that not included in that total are payments to trucking companies (excepting the fresh citrus figures which include trucking), which transport annually as much as the equivalent of 20,000 carloads of fresh vegetables and melons from California.[50]

As we have noted, the transportation payments just mentioned pertain only to fresh fruits and vegetables. But transportation payments are also made by other food industries in the state. The California canning and freezing industries, in 1950, are estimated to have paid out some 48 million dollars for transportation of raw and finished products,[51] with about 6 million dollars for the transportation costs of processed citrus products.[52] Data available indicate that the California fruit and vegetable canners and freezers, in 1949, shipped about 1.4 billion pounds by rail for which the railroads received almost 22 million dollars and about 717 million pounds by water for which the intercoastal shipping lines received almost 8.25 million dollars.[53]

The transportation figures for only fresh fruits and vegetables and the canning and freezing industries of the state are clearly indicative of the significance of those industries in supporting the transportation services. Yet, those industries are only part of the picture. The other food industries in the state also use and pay for transportation. It thus becomes even more clear how the food industries in California are economically interrelated with other industries.

Other Services.--The California food industries are economically related, in a close manner, with what may be termed two groups or types of other industries. One group comprises those industries whose activity depends, in whole or in part, upon the business they receive from the

distribution of the products of the California food industries. Examples include, in addition to the railroad and shipping lines noted earlier, icing companies, terminal market facilities, auction and private sale, local truckers, advertising agencies, distributors, wholsesalers, jobbers, retailers, to mention only a few. Another group of related industries is made up of those firms whose business activity depends, in whole or in part, upon purchases of production equipment and services by the California food industries. A few examples include lumber mills, tin can manufacturers, wood and paper box factories, farm equipment firms, food processing and machinery companies, glassmakers, printers of labels as well as seed and nursery-stock suppliers, among others.

Although no monetary estimates are available for the economic indicators of these many types of operations, it is pertinent that they be noted and their relation to the food industries recognized. Their significance may easily be slighted. The vegetable seed industry is an example. Vegetable seeds are relatively expensive, and seed companies in the state derive a significant portion of their income from sales to California farmers. Another example is that of nurseries which furnish young trees, citrus, deciduous and nut, to California farmers. Such derivative industries aggregate into a significant part of the state's agricultural and general economy. Farm equipment companies servicing the state's growers have been noted above, but mention must also be made of the industrial equipment concerns which sell or rent their machinery to packing houses, canneries, and freezing plants. The various derivative industries, which service the California food industries, are important contributors to the economic functioning and well-being of many cities and towns in the state; for example, Santa Ana and Covina, among others, are dependent on the citrus industry. In addition, towns such as Hilts, Westwood, Susanville, and others are

dependent on their lumber mills which make box shook and boxes used in the shipment of fresh fruit. These are significant examples of how a host of other industries have been developed and built around the food industries in California.

Ice companies, as well as mechanical refrigeration concerns, find a lucrative source of revenue stemming from the California fruit and vegetable industries. Ice companies in the fresh shipping areas of the state are heavily dependent on those industries for their operations. Large quantities of ice are used in the transportation of fresh fruits and vegetables shipped from the state. In pretransport packing alone, from 7,500 to 10,000 pounds of ice are used per car. And, in addition, ice is packed into the crates in packing commodities such as lettuce, carrots, and spinach. Out-of-state icing services are also drawn upon while railroad cars are in transit to the eastern markets.

In producing areas, petroleum companies derive a large portion of their sales receipts from the sale of gasoline, oil and lubricants to food producers and processors. Here, also, should be noted the oil and other supplies used by the citrus and other semitropical fruit industries in their frost protection operations.

Spread over the agricultural areas of the state, among the thousands of acres of fertile land in the delta region, the central valleys, and the coastal areas are found operations of the food industries. Many communities and their surrounding areas depend in large part upon the operations of the various food industries. Examples include the South Coast and parts of the Los Angeles area, Bakersfield, Fresno, Salinas-Watsonville-Hollister area, San Jose and the East Bay, Modesto, Sacramento and Marysville, among the more prominent. Farmers, workers in the fields, packing sheds, canneries, freezing plants, dairies, and creameries, and tradesmen all participate in a gigantic economic network that comprises the food industries of the state.

And that economic network has among its objectives not only the improvement of the economic status or well-being of the agricultural industries but also the economic well-being of other industries, for the status of the production-distribution industries is closely related to the economic status of other industries and consumers.

Reference has been made, in an earlier part of this statement, to California's high economic position with respect to the food industries. Various economic indicators have been cited concerning the economic importance of the California food industries to the state's economy and to the nation. In an over-all and balanced view, moreover, it must be noted that for many crops California is the dominant producing state in the country, and in some cases, the only significant producing state. Data from various sources attest to California's outstanding role in the production, processing, and marketing of various food products. Such factual data and information clearly signify that economic factors and developments affecting, or affected by, the California food industries have repercussions and chain reactions on similar and related industries in the country at large. Such economic interactions, it is evident, affect the interests not only of the country's farmers and marketers, but also the interests of the country's consumers.

V. Production to Meet Consumer Needs

We have indicated some of the major characteristics of California agriculture and have also commented upon the position of the food industries in the state. Their economic importance is clear, and their relations to other industries are now evident. But it is pertinent to note here that there is a direct tie-in between the California food industries and recent trends in food consumption. This is especially relevant for the industries in fruits and vegetables and dairy products.

During the past four or five decades, marked changes have developed in the structure of the diet purchased and consumed by individuals in this country.54/ There has occurred a marked upward trend in the per-capita consumption of fruits and vegetables and, also, a rising trend in dairy products. The per-capita consumption of fats and oils and eggs has also followed an upward trend, but less marked than that of fruits and vegetables or dairy products. Meats, poultry and fish have exhibited no apparent long-time trend. But grain products, white potatoes, and sweet products have tended to follow a somewhat sharp declining trend. In each of the food groups, there have occurred year-to-year fluctuations and cyclical variations, but the general trends have followed the course we have just sketched.

Increased knowledge has been accumulated with reference to nutritionally desirable and actual diets. Advances in the science of human nutrition have occurred along with advances in cultural and production practices, food technology, marketing and merchandising. Recent studies of consumption practices have enabled students of human nutrition to make comparisons between actual diets and nutritionally desirable diets for various combinations of price and income levels. The results of such studies have pointed to the importance of having adequate proportions of dairy products, citrus fruits and tomatoes, and leafy, green and yellow vegetables in the diets of our consumers.

As noted above, American consumers in general have increased their intake of fruits and vegetables. For example, most consumers now use more vegetables and citrus fruits than they used to, but the result is still less than the requirements for a nutritionally adequate diet for most people. It has been estimated that large groups of our consumers should substantially increase their consumption of leafy, green and yellow vegetables and their consumption of citrus fruits and tomatoes.55/ Such requirements, of course,

vary among income, regional, age, occupational, and other groupings of consumers; the needs cited refer to a large bulk of the population.

A point of significance here is that some of the food groups for which increased consumer intake is nutritionally desirable are the very food groups in which California food industries are leading producers and distributors. As noted earlier, the state ranks high in the production and shipment of fresh and processed vegetables, including tomatoes, and fruits, including citrus. Thus, the structure of the food industries in California is such that it fits in well with prevalent trends in consumption and the nutritionally desirable goals envisaged by human nutrition experts.

But in order to produce those food products with increasing efficiency so that they can come within reach of more people and their consumption can be increased by current users, it is necessary to draw upon production and processing techniques which help to maintain and increase yields. It is here that the use of chemicals in food products is pertinent not only to farmers and processors but also to consumers. Without necessary weapons to contain the destruction caused by insects, plant disease, and similar barriers to the maintenance of production yields or their increase, and without processing techniques which aid in maintaining quality, the interests of both producers and consumers are affected.

As summary and concluding comments, it may be worth while to reiterate the following major points which have been sketched in this statement:

> The California agricultural economy and its food industries are a significant part of the general economy of the state.
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> The California food industries comprise a complicated and widespread network of economic operations. Their economic status affects and is affected by operations in other industries.
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> The California food industries participate directly and indirectly in the creation and generation of significant amounts of employment and income.

The California food industries have over the years expanded their output and operations. Increased production yields have aided essentially in attaining this expanded production. And the increased yields have in considerable part been associated with more efficient production-processing techniques, including the use of materials to restrain destruction from insects, disease and similar food destroying agents.

The California food industries include, as a significant segment, the production and marketing of fresh and processed fruits and vegetables, increased consumption of which is considered to be an important part of nutritionally desirable diet for most American consumers.

These economic aspects of the California food industries are also in substantial part characteristic of the nation's food industries. And in food production and processing, the use of materials which help to increase production efficiency without adversely affecting the health of the nation contribute to the stability and well-being of not only the agricultural economy but also of the national economy.

NOTE:

The data referred to and drawn upon in the preceding statement are from the sources noted in the following list of references; each one is numbered so as to correspond with the reference number indicated in the text. In addition, selected statistical data are summarized in the following tables.

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17/ Same as reference 2/.

18/ California Crop and Livestock Reporting Service, California Field Crops, Annual Summary for 1950. January 16, 1951.

19/ Kuznets, G.M., I.M. Lee, and W.G. O'Regan, Index Numbers of Prices Received, Production, and Marketings of Crops, Livestock and Livestock Products and Index Numbers of Acreage of Crops, California 1910-1948: I, Field Crops; II, Truck Crops; III, Fruits and Nuts; IV, Livestock and Livestock Products. University of California, College of Agriculture Experiment Station, (Giannini Foundation Mimeographed report No. 102), February 1950.

20/ California Crop and Livestock Reporting Service, Vegetable Crops in California, May 1951.

21/ Same as reference 19/.

22/ California Crop and Livestock Service, California Fruit and Nut Crop Annual Summary as of December 1950, January 11, 1951.

23/ Shear, S.W. Deciduous Fruit Statistics, University of California, College of Agriculture Experiment Station, Giannini Foundation Mimeographed Report No. 83 (June 1943), with data (unpublished) for subsequent years from Dr. Shear; also, reference 19/.

24/ Same as reference 7/.

25/ Same as reference 7/.

26/ Based on data from Canners League of California and National Canners Association.

27/ Same as reference 26/.

28/ Canners League of California

29/ U.S. Dept. of Commerce, Bureau of the Census, Census of Agriculture California, Preliminary (AC50-2 No. 93) January 23, 1951.

30/ U.S. Dept. of Commerce, Bureau of the Census, U.S. Census of Agriculture: 1945, Vol. 1, Part 33, California.

31/ Produce Reporter Company. The 1950 Fruit and Produce Credit Book, with classified list of shippers.

32/ Estimated from records of California Tree Fruit Agreement.

33/ Estimated from records of Early Apple Advisory Board, Sebastopol, California.

34/ Estimated from records of California Grape and Tree Fruit League.

35/ Data from California Fruit Growers Exchange, Los Angeles, California.

36/ Data from Grower-Shipper Vegetable Association of Central California, Salinas, California.

37/ Same as reference 36/.

38/ California Processors and Growers, Inc. and California State Council of Cannery Unions. California's Canning and Freezing Industry--A joint Presentation by Labor and Management. Issued in 1951.

39/ Same as reference 38/.

40/ From data furnished by California Fruit Growers Exchange, Los Angeles, California.

41/ The Wine Advisory Board, Wine Institute Bulletin, Fifteenth Annual Wine Industry Statistical Survey, Part I, Preliminary Totals (March 9, 1951), p. 22, gives the following data on the number of California Bonded Wine and Brandy Production and Storage Premises (figures are for total number operated any part of the fiscal year ended June 30, 1950): Bonded wineries, 374; Bonded storerooms and bonded field warehouses, 54; Fruit distilleries, 89; Internal revenue bonded warehouses, 59; or a total number of 576.

42/ Hoos, Sidney. The Economic Importance of the Fresh Fruit and Vegetable Industries in California. University of California, College of Agriculture Experiment Station (April 1950) Giannini Foundation Mimeographed Report No. 105.

43/ Same as reference 38/.

44/ California State Department of Industrial Relations and State Department of Employment. Employment and Unemployment in California, No. 14, February 1951.

45/ Same as reference 42/.

46/ Same as reference 38/.

47/ From data furnished by California Grape and Tree Fruit League, San Francisco, California, and California Fruit Exchange, Sacramento, California.

48/ From data furnished by Western Growers Association, Los Angeles, California.

49/ From data furnished by California Fruit Growers Exchange, Los Angeles, California.

50/ From information furnished by Western Growers Association, Los Angeles, California.

51/ Same as reference 38/.

52/ Same as reference 49/.

53/ Based on data from following sources: Exhibit of Canners League of California, Before the Interstate Commerce Commission, Ex Parte No. 175, Increased Freight Rates 1951, Salt Lake City, Utah, June 11, 1951; Estimated All Rail Shipments of Canned Fruits and Vegetables from California to Transcontinental Points by Approximate Rate Territories for Years 1939, 1940, 1946, 1947, 1948, 1949; and Estimated Water Shipments of Canned Fruits and Vegetables from California via Intercoastal Routes to Port Groups Indicated (North Atlantic Ports, South Atlantic Ports, Gulf Ports), from Canners League of California.

54/ U.S. Dept. of Agriculture, Bureau of Agricultural Economics, Consumption of Food in the United States, 1909-1948, Misc. Pub. No. 691, August 1949; and Supplement for 1949, September 1950.

55/ Among the various publications on consumption and nutrition, the following are cited:

Stiebeling, Hazel K., Better Nutrition as a National Goal, and Stiebeling Hazel K, and Faith Clark, Planning for Good Nutrition in Food and Life, Yearbook of Agriculture, 1939. U.S. Dept. of Agriculture (76th Congress, 1st Session, House Document No. 28).

Wells, O.V., Testimony before the Select Committee of the House of Representatives Investigating National Defense Migration, 1942.

Christensen, R.P., Efficient Uses of Food Resources in the United States, U.S. Dept. of Agriculture, Tech. Bul. 963, 1948.

TABLE 1

California: Farms and Farm Characteristics, Census of 1945

Item	Census of 1945
FARMS, ACREAGE AND LAND AREA	
Farms, number	138,917[a]
Approximate land area, acres	100,353,920
Proportion in farms, per cent	34.9
Land in farms, acres	35,054,379
Land in farms according to use	
Cropland harvested	
Farms reporting	112,399
Acres	7,535,523
Cropland total	
Farms reporting	122,071
Acres	11,362,817
Land pastured total	
Farms reporting	55,979
Acres	23,748,475
Woodland total	
Farms reporting	12,208
Acres	4,032,364
VALUE OF FARM PROPERTY	
Value of land and buildings, dollars	3,484,548,812
Average per farm	
All farms, dollars	25,084
Farms 30 acres or more, dollars	41,789
Average per acre, dollars	99.40
Value of implements and machinery	
Farms reporting	92,636
Dollars	207,080,480
Value of livestock on farms, dollars	301,826,320

[a] The 1950 Census reports 137,137 farms in California.

Source: U.S. Census of Agriculture 1945, vol. I, part 33.

TABLE 2

California: General Statistics for Standard Metropolitan Areas, Food and Kindred Products Industry, 1947

Title	Total number of establishments	Number of establishments with: 1-19 employees	20-99 employees	100 employees and over	All employees: Number (average for the year)	All employees: Salaries and wages, total	Production workers: Number (average for the year) 1939	Production workers: Number (average for the year) 1947	Production workers: Wages, total 1947	Value added by manufacture	Expenditures for new plant and equipment
						1,000 dollars			1,000 dollars		
FOOD AND KINDRED PRODUCTS	2,803	1,785	735	283	120,510	355,586	70,466	94,942	252,202	851,836	95,991
Meat products	275	154	101	20	13,617	43,976	6,183	10,680	32,099	69,690	6,896
Meat packing, wholesale	133	60	57	16	10,353	34,871	4,656	7,969	25,301	51,240	5,207
Prepared meats	103	67	33	3	2,337	7,132	777	1,833	5,299	15,076	1,311
Poultry dressing, wholesale	39	27	11	1	927	1,973	750	828	1,569	3,374	380
Dairy products	176	119	47	10	4,554	12,769	2,803	3,431	8,950	32,149	4,536
Creamery butter	20	12	7	1	545	1,342	731	463	1,119	4,421	291
Concentrated milk	29	10	13	6	1,514	4,158	709	1,253	3,352	11,845	1,477
Ice cream and ices	94	73	19	2	1,954	5,736	1,043	1,304	3,393	13,003	2,322
Canning, preserving, and freezing	492	226	149	117	41,320	109,688	32,255	37,416	91,643	254,696	34,169
Canned sea food	54	11	20	23	8,136	18,510	5,558	7,695	15,816	52,724	2,816
Cured fish	6	4	2	--	150	433	41	128	344	743	27
Canning and preserving, except fish	218	72	66	80	26,379	74,676	19,001	23,669	62,101	161,191	27,004
Dehydrated fruits and vegetables	87	59	26	2	1,701	3,541	6,494	1,586	3,078	9,916	351
Pickles and sauces	90	67	17	6	2,950	8,287	967	2,539	6,908	22,969	2,359
Frozen foods	37	13	18	6	2,004	4,241	164	1,799	3,396	7,153	1,612

(Continued on next page.)

Table 2 continued.

Title	Total number of establishments	Number of establishments with: 1-19 employees	20-99 employees	100 employees and over	All employees: Number (average for the year)	All employees: Salaries and wages, total	Production workers: Number (average for the year) 1939	Production workers: Number (average for the year) 1947	Production workers: Wages, total 1947	Value added by manufacture	Expenditures for new plant and equipment
						1,000 dollars			1,000 dollars		
Grain-mill products	252	173	65	14	6,536	19,884	2,362	4,831	13,696	58,132	5,642
Flour and meal	13	7	2	4	887	2,914	504	671	2,172	7,948	757
Prepared animal feeds	205	143	53	9	4,828	14,424	1,547	3,512	9,719	37,711	3,767
Rice cleaning and polishing	10	4	5	1	444	1,556	179	361	1,127	8,971	605
Bakery products	403	259	108	36	16,547	55,957	11,455	11,295	31,648	104,136	9,314
Bread and other bakery products	384	253	101	30	13,668	48,723	10,054	8,813	27,299	85,630	7,127
Biscuit, crackers, and pretzels	19	6	7	6	2,879	7,234	1,401	2,482	5,349	18,506	2,187
Sugar	12	--	1	11	5,633	16,392	3,916	5,051	14,003	33,018	2,180
Beet sugar	10	--	1	9	2,788	7,703	a/	2,506	6,648	21,410	1,346
Confectionery and related products	173	113	43	17	5,260	13,204	2,900	4,283	9,308	28,687	2,048
Confectionery products	166	109	41	16	5,010	12,415	2,751	4,084	8,779	25,616	1,917
Chocolate and cocoa products	3	1	1	1	183	650	a/	138	410	2,602	95

(Continued on next page.)

Table 2 continued.

Title	Total number of establishments	Number of establishments with: 1-19 employees	20-99 employees	100 employees and over	All employees: Number (average for the year)	All employees: Salaries and wages, total	Production workers: Number (average for the year) 1939	Production workers: Number (average for the year) 1947	Production workers: Wages, total 1947	Value added by manufacture	Expenditures for new plant and equipment
						1,000 dollars			1,000 dollars		
Beverages	486	359	103	24	13,640	44,286	4,230	9,311	28,138	157,469	22,645
Bottled soft drinks	231	187	37	7	4,025	12,656	879	1,732	4,862	26,280	4,854
Malt liquors	16	--	5	11	4,144	16,691	1,916	3,305	13,213	48,401	7,215
Wines and brandy	218	161	53	4	4,650	12,828	1,248	3,661	8,833	68,926	9,566
Miscellaneous food preparations	534	382	118	34	13,403	39,430	4,392	8,644	22,717	113,859	8,559
Shortening and cooking oils	40	35	3	2	507	1,814	558	391	1,255	10,860	1,006
Flavorings	57	42	12	3	1,870	5,512	527	1,101	3,174	14,776	1,199
Vinegar and cider	9	8	1	--	101	232	67	86	202	531	31
Manufactured ice	189	121	58	10	4,702	13,527	1,309	2,863	7,676	25,115	2,919
Macaroni and spaghetti	38	26	11	1	689	1,728	418	566	1,228	3,597	343
Food preparations, N.E.C.	188	141	31	16	4,979	14,721	1,191	3,194	7,737	45,714	2,726

a/ Withheld to avoid disclosing figures for individual companies.

Source: U. S. Bureau of the Census. Census of Manufactures: 1947, vol. III, Statistics by States, Washington, D. C., 1950.

TABLE 3

Cash Receipts from Farm Marketings,
California and United States, 1940 to 1950

Year	California			United States
	Crops	Livestock and products	Total	Total
	1,000 dollars			
1940	418,928	232,188	651,116	8,343,443
1941	569,799	290,638	860,437	11,156,656
1942	767,839	380,512	1,148,351	15,316,418
1943	1,114,543	460,622	1,575,165	19,341,752
1944	1,237,672	488,675	1,726,347	20,237,831
1945	1,252,688	533,809	1,786,497	20,780,883
1946	1,466,312	609,245	2,075,557	24,518,527
1947	1,412,751	751,954	2,164,705	30,186,299
1948	1,333,452	830,636	2,164,088	30,545,494
1949	1,286,022	771,189	2,057,211	28,126,966
1950	1,415,840	744,600	2,160,440	27,920,746

Source: U. S. Bureau of Agricultural Economics. The Farm Income Situation. Also, Cash Receipts from Farming by States and Commodities, 1924-1944.

TABLE 4

California: Fruit and Nut Crops, Bearing Acreage, Production and Value, 1940-1950

Year	Total bearing acreage	Production of value	Value
	1,000 acres	tons	1,000 dollars
1940	1,460.2	5,914,800	164,579
1941	1,459.2	6,791,800	245,471
1942	1,459.0	6,419,800	331,528
1943	1,467.9	6,833,800	554,000
1944	1,476.3	6,996,300	641,004
1945	1,491.7	7,512,300	616,891
1946	1,501.4	7,560,200	742,088
1947	1,510.7	7,545,300	423,590
1948	1,493.0	6,998,900	417,054
1949	1,386.2	6,327,000	356,885
1950	1,363.8	6,340,800	498,784

Sources: U. S. Bureau of Agricultural Economics. Fruits and Nuts, Bearing Acreage 1919-1946. Washington, D. C., 1949. California Crop and Livestock Reporting Service. Acreage Estimates, California Fruit and Nut Crops, Annual Issues, 1947-1950; and California Fruit and Nut Crop Annual Summary as of December 1950. Sacramento, California, January 11, 1951.

TABLE 5

California: Total Acreage, Production and Value of Truck Crops, Selected Years, 1930-1950

Year	Total acreage	Total production	Total value
	acres	tons	dollars
1930	530,610	2,329,000	103,724,000
1935	578,510	2,362,000	85,433,000
1940	585,770	3,093,000	111,706,000
1945	732,080	4,632,000	317,025,000
1946	796,080	5,476,000	340,562,000
1947	735,030	5,169,000	369,286,000
1948	718,500	5,089,000	358,098,000
1949	689,690	5,153,000	348,802,000
1950	728,100	5,462,000	338,070,000

Source: California Crop and Livestock Reporting Service. Vegetable Crops in California, Total Acreage, Production and Value of Commercial Crops, 1941-1950. Sacramento, May 1951.

TABLE 6

California: Acreage Harvested, Production, and Value of Field Crops, Selected Years, 1936 to 1950

Year	Acreage harvested	Production tons	Average value per ton	Value of production
			dollars	
5-year averages:				
1936-1940	5,333,840	9,920,469	17.68	175,412,000
1941-1945	5,611,540	10,508,122	32.56	342,162,000
1941	5,381,600	9,903,896	23.37	231,460,000
1942	5,731,700	10,844,556	28.60	310,129,000
1943	5,585,900	10,168,562	37.20	378,278,000
1944	5,627,400	10,550,182	37.89	389,160,000
1945	5,731,100	11,073,412	36.28	401,783,000
1946	5,909,100	12,359,714	44.79	553,601,000
1947	6,187,000	13,078,911	50.77	663,972,000
1948	6,496,200	13,144,850	50.74	666,934,000
1949	6,719,200	13,091,956	47.23	618,342,000
1950	6,553,400	15,111,244	44.55	673,253,000

Source: California Crop and Livestock Reporting Service, California Field Crops, Annual Summary for 1950, Sacramento, California, January 16, 1951.

TABLE 7

California: Livestock on Farms, January 1; Number, Value Per Head, and Total Value; Average 1940-1949, Annual 1949, 1950, 1951

	1940-1949			1949			1950			1951a/		
	Number	Value per head	Total value	Number	Value per head	Total value	Number	Value per head	Total value	Number	Value per head	Total value
	1,000	dollars	1,000 dollars	1,000	dollars	1,000 dollars	1,000	dollars	1,000 dollars	1,000	dollars	1,000 dollars
All cattle and calves	2,748	89.10	247,975	2,736	158.00	432,288	2,709	139.00	376,551	2,872	191.00	548,552
Hogs, including pigs	857	24.40	20,184	837	41.50	34,736	879	26.30	23,118	835	36.10	30,144
All sheep and lambs	2,571	11.02	28,326	1,850	20.25	37,463	1,819	20.09	36,542	1,867	30.10	56,196
Horses and colts	152	90.60	13,854	118	74.00	8,732	106	74.00	7,844	105	75.00	7,875
Mules and mule colts	18	97.40	1,822	11	68.00	748	10	75.00	750	9	75.00	675
Chickens	18,515	1.29	24,338	20,552	1.20	35,760	23,416	1.50	35,124	23,336	1.65	38,504
Turkeys	1,092	5.90	6,079	883	10.00	8,830	927	6.80	6,304	816	6.90	5,630

a/ 1951 preliminary.

Source: U.S. Bureau of Agricultural Economics. Livestock and Poultry on Farms, January 1, revised estimates 1940-1945, by states. Washington, D.C., 1947. Also, Livestock on Farms, January 1, annual issues.

TABLE 8

United States: Pack of Principal Varieties of Canned Fruits, Vegetables, and Juices and the Percentage of Each for Year, 1950

Area of United States	Fruits	Vegetables[a/]	Fruit juices	Total	Per cent of total United States			
					Fruits	Vegetables	Fruit juices (excluding nectars)	Total
	actual cases, thousands							
California	36,215	30,541	4,378	71,134	52.6	17.6	10.7	25.1
Washington and Oregon	6,914	15,226	--	22,140	10.1	8.8	--	7.8
Total Pacific Coast	43,129	45,767	4,378	93,274	62.7	26.4	10.7	32.9
Other than Pacific Coast	25,695	127,908	36,444	190,047	37.3	73.6	89.3	67.1
Total United States	68,824	173,675	40,822	283,321	100.0	100.0	100.0	100.0

a/ Includes tomato juice.

Source: Canners League of America, Exhibit before the Interstate Commerce Commission, June 11, 1951.

TABLE 9

California Pack Statistics, Fruits and Vegetables,

	1946	1947	1948	1949	1950
	Fruits				
	24/2½ case basis				
Apricots	10,223,849	3,062,545	4,650,777	2,307,404	3,660,606
Cherries, sweet	572,670	288,696	236,259	688,081	372,889
Pears	1,326,135	1,458,663	1,184,170	2,069,614	2,509,494
Free peaches	1,023,934	1,497,286	1,707,906	1,499,127	1,676,930
Cling peaches	17,284,938	15,308,838	14,649,561	16,524,717	14,417,249
Spiced cling peaches	160,389	265,105	151,921	477,762	236,191
Fruit cocktail[a]	7,751,629	9,386,078	9,902,291	6,268,695	7,475,367
Fruits for salad[a]	546,843	558,021	1,011,375	931,481	608,686
Mixed fruits	744,504	244,726	84,895	436,296	69,155
Apple sauce	b/	b/	b/	492,502	582,847
Figs	647,829	841,456	580,869	279,286	494,114
Plums	97,849	102,641	38,300	c/	c/
Other fruits	594,573	409,936	279,956	605,035	437,046
Totals	40,975,142	33,423,991	34,478,280	32,580,000	32,540,574
	Vegetables				
	actual cases				
Asparagus	2,783,460	2,258,650	1,983,201	2,625,134	2,566,279
Beans, string	359,693	297,060	357,470	715,448	736,792
Carrots	816,595	58,062	665,570	97,781	171,354
Peas	156,807	182,670	120,441	d/	d/
Spinach	3,034,718	1,380,235	1,453,575	1,960,412	2,499,960
Tomatoes	4,038,436	5,895,500	4,712,962	3,978,132	3,569,916
Tomato juice	9,267,624	5,753,035	5,866,512	6,341,454	6,137,050
Tomato puree	5,296,373	2,268,463	969,064	1,551,946	1,389,693
Tomato paste	3,629,062	5,558,922	3,072,212	3,585,943	2,832,822
Tomato catsup	4,234,287	7,191,561	4,626,050	3,401,189	5,403,837
Tomato chili sauce	e/	783,077	322,655	477,879	622,846
Tomato sauce and/or hot sauce	5,285,600	3,702,472	3,983,197	3,914,174	4,786,098
Tomato products (not elsewhere specified)	625,524	143,589	118,661	170,587	264,516
Other vegetables	1,945,609	754,764	776,081	1,708,996	2,040,611
Totals	41,473,788	36,228,060	29,027,651	30,529,075	33,021,774
Grand totals	82,448,930	69,652,051	63,505,931	63,109,075	65,562,348

a/ Fruit cocktail and fruits for salad include remanufactured packs.
b/ Included in "other fruits."
c/ Other fruits.
d/ Other vegetables.
e/ Included in tomato products (not elsewhere specified).

Source: Canners League of California, San Francisco, January 17, 1951. Processed.

TABLE 10

Acreage, Production, Value, and Related Data for
Major California Fresh Fruits and Truck Crops
Average 1937-1941

Groups and items	Bearing acreage for fresh use	Production for fresh use	Farm value of fresh production	Fresh shipments		In fresh production	
				In-state	Out-of-state	Man-hour employment	Payrolls (labor)
	1	2	3	4	5	6	7
	acres	tons	1,000 dollars	tons	tons	1,000 man-hours	1,000 dollars
Fresh fruits:							
Apples	16,276	93,096	2,079	75,120	17,976	2,702	960
Apricots	5,850	17,500	800	11,300	6,200	883	293
Grapes	100,946	531,840	12,232	59,480	472,360	16,253	5,754
Pears	22,799	114,520	3,294	25,660	88,860	3,990	1,414
Plums	21,621	62,700	2,510	12,300	50,400	4,476	1,578
Peaches	12,411	90,480	2,232	67,020	23,460	2,433	856
Cherries	7,232	12,150	1,628[a]/	6,120	5,760	1,642	579
Oranges[b]/[e]/[g]/	232,700[h]/	47,500	47,800[c]/	40,500[d]/		35,370	12,566
Lemons[b]/	52,700	12,300	13,800[c]/	8,100[d]/		13,966	4,901
Grapefruit[b]/							
Summer	8,200	1,200	1,063[c]/	1,100[d]/[f]/		599	131
Desert[f]/	21,000	3,900	1,212[c]/	3,100[d]/[f]/		1,722	609
Avocados	12,803	11,992	1,330	NA		615	218
Dates	2,726	4,330	557	NA		602	213
Persimmons	1,402	3,855	118	NA		NA	NA
Pomegranates	615	2,170	41	NA		NA	NA
Figs (all)	17,058	6,170	342	5,310	860	733	253
Olives (all)	24,043	43,500	3,835	42,580	920	3,005	1,058
Walnuts	119,703	54,720	11,523	NA	NA	9,217	3,232
Almonds	73,841	14,720	4,328	NA	NA	3,914	1,403
Total fruits and nuts	753,926	1,128,643	110,724			102,122	36,018

(Continued on next page.)

Table 10 continued.

Groups and items	Bearing acreage for fresh use	Production for fresh use	Farm value of fresh production	Fresh shipments		In fresh production	
				In-state	Out-of-state	man-hour employment	Payrolls (labor)
	1	2	3	4	5	6	7
	acres	tons	1,000 dollars	tons	tons	1,000 man-hours	1,000 dollars
Fresh vegetables:							
Asparagus	28,176	25,728	3,821	1,145	24,583	3,184	1,137
Melons	39,540	172,568	7,958	73,360	99,208	4,429	1,569
Tomatoes	27,370	117,448	7,690	72,191	45,257	6,158	2,188
Peas	46,210	61,710	5,812	28,149	33,561	7,995	2,844
Spinach	2,840	15,129	744	15,123	6	531	187
Strawberries	5,506	15,300	2,608	12,979	2,321	5,908	1,800
Artichokes	10,120	17,400	1,620	NA	NA	1,022	365
Lettuce	99,500	494,060	22,108	102,585	391,475	14,626	5,169
Cauliflower	15,482	86,062	2,734	48,598	37,464	2,029	718
Cabbage	7,560	64,660	970	52,116	12,544	908	322
Carrots	21,940	195,270	6,857	68,120	127,150	6,538	2,304
Celery	13,630	192,790	7,462	90,224	102,566	5,642	1,879
Beans (snap)	10,900	25,095	3,871	NA	NA	3,619	1,281
Onions	6,434	64,250	1,585	44,812	19,438	1,216	475
Total vegetables	335,208	1,547,470	75,840			63,805	22,238
Grand total	1,089,134	2,676,113	186,564			165,927	58,256

a/ 1938-1941 average.

b/ Citrus crop years are 1937-38 to 1941-42 average. Includes Valencias, navels and miscellaneous varieties; also, acreage and production for processing. Production and shipment figures are in units of 1,000 boxes.

c/ On-tree farm value.

d/ Fresh shipments not broken down as inter- or intrastate.

(Continued on next page.)

Table 10 continued.

e/ Includes Arizona.

f/ Includes small quantities for local consumption or elimination.

g/ Includes small quantities of Arizona oranges (less than 2 per cent of the total). Data are not reported separately for California in recent years.

h/ Arizona acreage omitted in calculating average since data are lacking for certain years in the average period.

Sources:

Col. 1: California Crop and Livestock Reporting Service, Acreage Estimates, California Fruit and Nut Crops, annual issues, Sacramento, California; and U.S. Bureau of Agricultural Economics, Commercial Truck Crops for Fresh Markets.

Col. 2: U.S. Bureau of Agricultural Economics, Fruits (Noncitrus) Production, Farm Disposition, and Utilization of Sales, 1899-1944, Washington, D.C., 1948; and California Fruit Growers Exchange, Statistical Information on the Citrus Fruit Industry, May 1951.

Col. 3: For fresh fruits, see sources cited for columns 1 and 2. In cases where a significant portion of total production was for other than fresh use, the value figure presented was calculated by multiplying production for fresh use by the appropriate first delivery price. The sources of these prices are: U.S. Bureau of Agricultural Economics, Fruit and Nut Prices, Prices Received by Growers for Fruit and Nut Crops by Type of Sale and Utilization Groups, 1909-46, Washington, D.C., October 1947. For fresh vegetables, see source cited for column 1.

Col. 4: Column 2 minus column 5.

Col. 5: U.S. Production and Marketing Administration, Carlot Shipments of Fruits and Vegetables, 1925-1942, annual issues, Washington, D.C.; and U.S. Bureau of Agricultural Economics, Fruits (Noncitrus) Production, Farm Disposition, and Utilization of Sales, 1899-1944, Washington, D.C., 1948.

Cols. 6 and 7: See following note.

(Continued on next page.)

Table 10 continued.

Note.

Estimates of man-hour employment and total payrolls were constructed for all commodities, using approximately the same method in all cases. This method, together with the sources employed, is described in detail in this note.

Estimates were first made on man-hour employment. Basic data concerning the necessary man-hours per acre required to produce the state average yield of each commodity were obtained from three sources: (1) MacGillivray, John H., Arthur Shultis, A. E. Michelbacher, P. A. Minges, and L. D. Doneen. Labor and Material Requirements of California Vegetables. California Agricultural Experiment Station, Berkeley; (2) Burlingame, B. B. Hours of Man Labor Required for the Production of California Crops. (Unpublished data from his files); and (3) Sullivan, Wallace, J. C. Johnston, and I. J. Condit. Labor Requirements for Producing Certain California Subtropical Fruits. California Agricultural Experiment Station, Berkeley. Using this as a basis and adjusting the variable labor inputs according to physical outputs per acre from year to year, estimates of man-hour labor requirements per acre were obtained. The aggregate requirements were obtained by a multiplication of requirements per acre by the number of acres produced for fresh consumption.

After man-hour requirements were established, the payrolls were obtained through application of going average wage rates to the particular hours of various types of labor required. Wage rates were obtained from two sources: (1) Adams, R. L. Crop Manual. (Early edition and unpublished data from latest revision); and (2) State of California, Department of Employment. California Weekly Farm Labor Report (various issues). The total number of man-hours required were segregated into various categories, each viewing a particular rate of pay. The number of hours in each category was then multiplied by the respective average wage rate to obtain the total payroll per acre for each year. Again, the aggregate is the product of per-acre payroll and number of acres devoted to production for fresh use.

TABLE 11

Acreage, Production, Value and Related Data for
Major California Fresh Fruits and Truck Crops
Summary: 1947

Groups and items	Bearing acreage for fresh use	Production for fresh use	Farm value of fresh production	Fresh shipments		In fresh production	
				In-state	Out-of-state	Man-hour employment	Payrolls (labor)
	1	2	3	4	5	6	7
	acres	tons	1,000 dollars	tons	tons	1,000 man-hours	1,000 dollars
Fresh fruits:							
Apples	14,730	124,176	5,330	86,544	37,632	2,946	2,542
Apricots	7,960	20,700	1,938	10,800	9,900	1,138	979
Grapes	109,168	619,200	31,517	67,800	551,400	18,886	16,157
Pears	16,278	128,600	9,486	29,100	99,500	3,500	3,011
Plums	22,871	70,900	9,004	13,400	57,500	4,872	4,163
Peaches	14,497	129,600	9,180	86,544	37,632	3,146	2,696
Cherries	5,966	13,800	3,464	5,100	8,700	1,575	1,348
Oranges[b/e/g]	247,300	54,800	78,400[c]	43,000[d]		39,815	34,127
Lemons[b]	66,600	13,800	27,600[c]	9,400[d]		16,317	13,986
Grapefruit[b]							
Summer	9,500	1,900	2,356[c]	1,400[d/f]		836	722
Desert[f]	18,000	5,300	1,537[c]	2,600[d/f]		2,034	1,746
Avocados	14,442	18,340	7,336	NA	NA	809	693
Dates	3,594	10,160	823	NA	NA	1,060	909
Persimmons	1,202	3,575	297	NA	NA	NA	NA
Pomegranates	628	2,890	2,790	NA	NA	NA	NA
Figs	5,788	2,700	454	2,400	300	284	243
Olives	25,210	39,800	5,970	39,200	600	2,899	2,496
Walnuts	113,520	58,600	22,737	NA	NA	8,741	7,606
Almonds	95,276	29,000	16,182	NA	NA	6,288	5,431
Total fruits and nuts	792,530	1,347,841	236,401			115,146	98,855

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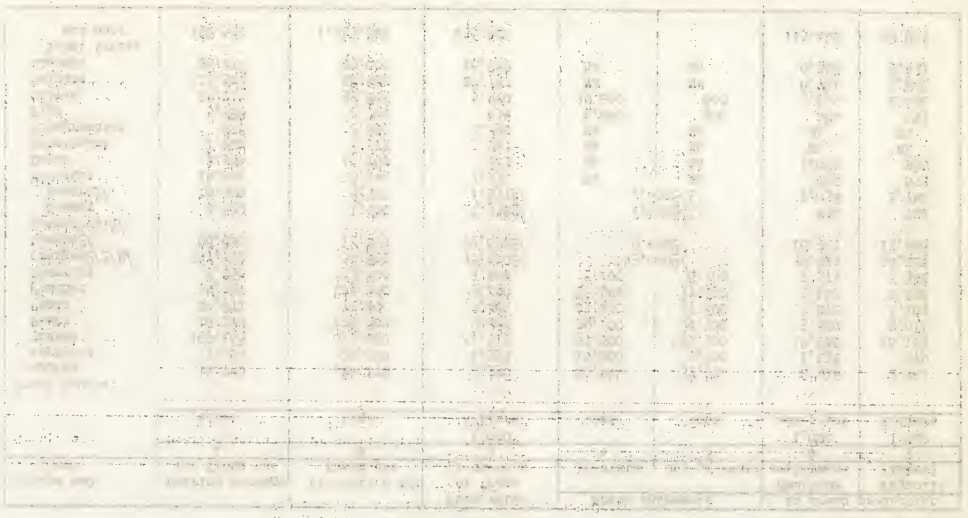

Table 11 continued.

Groups and items	Bearing acreage for fresh use	Production for fresh use	Farm value of fresh production	Fresh shipments		In fresh production	
				In-state	Out-of-state	Man-hour employment	Payrolls (labor)
	1	2	3	4	5	6	7
	acres	tons	1,000 dollars	tons	tons	1,000 man-hours	1,000 dollars
Fresh vegetables:							
Asparagus	22,870	30,870	8,232	6,924	23,946	3,362	2,890
Melons	66,110	258,947	28,365	74,723	184,224	7,074	6,148
Tomatoes	32,500	175,218	28,095	94,938	80,280	8,352	7,189
Peas	21,900	33,870	5,671	13,288	20,582	4,248	3,652
Spinach	4,350	13,509	976	13,329	180	561	483
Strawberries	3,050	14,616	8,079	13,443	1,173	4,618	3,501
Artichokes	7,250	15,220	2,283	NA	NA	834	718
Lettuce	116,400	788,410	77,818	184,800	603,610	20,719	17,460
Cauliflower	21,900	118,437	8,593	62,935	55,502	2,825	2,443
Cabbage	9,500	76,000	3,078	59,821	16,179	1,103	974
Carrots	23,600	225,800	19,107	52,070	173,730	7,411	6,385
Celery	13,970	318,110	25,332	141,234	176,876	7,516	5,840
Beans (snap)	8,400	23,715	4,305	NA	NA	3,158	2,683
Onions	8,400	108,800	6,250	47,555	61,245	1,814	1,548
Total vegetables	360,200	2,201,522	226,184			73,595	61,914
Grand total	1,152,730	3,549,363	462,585			188,737	160,769

For explanation of footnotes and sources of data see table 12.

Note: For procedures of estimating data in columns 6 and 7, see "Note to table 10."

TABLE 12

Acreage, Production, Value, and Related Data for
Major California Fresh Fruits and Truck Crops
Summary: 1948

Groups and items	Bearing acreage for fresh use	Production for fresh use	Farm value of fresh production	Fresh shipments		In fresh production	
				In-state	Out-of-state	Man-hour employment	Payrolls (labor)
	1	2	3	4	5	6	7
	acres	tons	1,000 dollars	tons	tons	1,000 man-hours	1,000 dollars
Fresh fruits:							
Apples	13,060	63,864	3,912	49,944	13,920	2,037	1,756
Apricots	5,970	20,900	1,432	12,800	8,100	967	830
Grapes	94,772	543,800	28,332	73,200	470,600	16,396	14,026
Pears	8,833	53,000	6,095	20,900	32,100	1,669	1,440
Plums	25,038	65,100	7,552	12,600	52,500	4,983	4,256
Peaches	14,673	119,600	9,766	88,465	31,135	3,052	2,612
Bush fruits	1,577	3,945	1,370	NA	NA	NA	NA
Cherries	7,432	7,700	2,510	2,700	5,000	996	855
Oranges[b/c/g/]	246,700	46,500	60,000[c/]	36,200[d/]		36,018	31,084
Lemons[b/]	64,900	12,900	23,200[c/]	8,500[d/]		15,511	13,304
Grapefruit[b/]							
Summer	9,500	1,500	1,245[c/]	1,100[d/f/]		722	627
Desert[f/]	17,500	3,900	1,872[c/]	1,900[d/f/]		1,645	1,418
Avocados	14,596	12,730	4,901	NA	NA	701	598
Dates	3,682	15,050	1,836	NA	NA	1,355	1,598
Persimmons	1,173	3,275	272	NA	NA	NA	NA
Pomegranates	631	2,790	100	NA	NA	NA	NA
Figs	8,410	3,000	348	2,400	600	362	311
Olives	25,366	61,800	8,467	60,800	1,000	3,932	3,374
Walnuts	111,667	61,600	27,227	NA	NA	9,715	8,375
Almonds	94,572	33,800	14,365	NA	NA	7,566	6,525
Total fruits and nuts	770,052	1,136,754	204,802			107,627	92,989

(Continued on next page.)

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Table 12 continued.

Groups and items	Bearing acreage for fresh use	Production for fresh use	Farm value of fresh production	Fresh shipments		In fresh production	
				In-state	Out-of-state	Man-hour employment	Payrolls (labor)
	1	2	3	4	5	6	7
	acres	tons	1,000 dollars	tons	tons	1,000 man-hours	1,000 dollars
Fresh vegetables:							
Asparagus	22,750	24,570	5,324	10,179	14,391	2,958	2,551
Melons	56,740	234,658	23,088	70,077	164,581	6,185	5,382
Tomatoes	38,100	178,610	24,742	90,207	88,404	9,068	7,831
Peas	19,500	27,645	4,750	10,369	17,276	3,588	3,079
Spinach	4,600	14,904	1,076	14,306	598	603	520
Strawberries	4,150	19,710	9,667	17,967	1,743	6,192	4,698
Artichokes	7,300	16,060	2,810	NA	NA	862	745
Lettuce	127,900	769,020	69,707	172,900	596,120	21,103	17,829
Cauliflower	20,200	127,336	8,122	23,849	103,487	2,807	2,443
Cabbage	9,400	95,500	3,548	83,113	12,787	1,222	1,069
Carrots	26,900	304,880	29,601	129,260	175,620	9,550	8,186
Celery	15,070	345,768	19,785	161,915	183,853	8,138	6,299
Beans (snap)	6,400	19,470	3,288	NA	NA	2,522	2,162
Onions	8,700	113,850	7,573	53,970	59,880	1,880	1,603
Total vegetables	367,710	2,291,981	213,081			76,678	64,397
Grand total	1,137,762	3,428,735	417,883			184,305	157,386

a/ 1938-1941 average.
b/ Citrus crop years are 1937-38 to 1941-42 average, 1946-47, and 1947-48.
Includes Valencias, Navels and miscellaneous.
Includes acreage and production for processing.
Production and shipment figures are in units of 1,000 boxes.
c/ On-tree farm value.
d/ Fresh shipments not broken down as inter- or intrastate.

(Continued on next page.)

Table 12 continued.

e/ Includes Arizona.
f/ Includes small quantities for local consumption or elimination.
g/ Includes small quantities of Arizona oranges (less than 2 per cent of the total). Data are not reported separately for California in recent years.
h/ Arizona acreage omitted in calculating average since data are lacking for certain years in the average period.

Sources:

Col. 1: Apples, apricots, grapes, pears, plums, peaches and cherries have estimated acreages. Citrus: California Fruit Growers Exchange. 1947 Statistical Information on the Citrus Fruit Industry and 1949 Supplement. Other fruits and nuts: California Crop and Livestock Reporting Service. Acreage Estimates, California Fruit and Nut Crops. Fresh vegetables: U.S. Bureau of Agricultural Economics. Commercial Truck Crops for Fresh Market.

Col. 2: All fruits and nuts except citrus: U.S. Bureau of Agricultural Economics. Fruits (Noncitrus) Production, Farm Disposition, and Utilization of Sales, 1899-1944. Also U.S. Bureau of Agricultural Economics. Fruits (Noncitrus) Production, Farm Disposition, and Utilization of Sales, 1947, 1948. Citrus fruits: see sources cited for column 1. Fresh vegetables: see sources cited for column 1.

Col. 3: For fresh fruits: see sources cited for columns 1 and 2. In cases where significant portion of total production was for other than fresh use, the value figure presented was calculated by multiplying production for fresh use by the appropriate first delivery point price. The sources of these prices are U.S. Bureau of Agricultural Economics. Fruit and Nut Prices. Prices Received by Growers for Fruit and Nut Crops by Type of Sale and Utilization Groups, 1909-46. October 1947; and U.S. Bureau of Agricultura Economics. Agricultural Prices. Supplement to Fruit and Nut Prices, October 28, 1949. For fresh vegetables see source cited in column 1.

Col. 4: Column 2 minus column 5.

Col. 5: U.S. Food Distribution Administration. Carlot Shipments of Fruits and Vegetables, 1925-1942; U.S. Production and Marketing Administration. Carlot Shipments of Fruits and Vegetables by Commodities, States and Months; and U.S. Bureau of Agricultural Economics. Fruits (Noncitrus) Production, Farm Disposition, and Utilization of Sales, 1899-1944, and same publication for the years 1947, 1948.

Cols. 6 and 7: See note to table 10.

TABLE 13

Production, Utilization and Farm Value of Selected Fruits Produced in California, Average 1937-1941, Annual 1947-1950

Fruit	Total production having value	Farm household use	Fresh sales	Per cent of total production sold for fresh use
	tons			per cent
Apples				
1937-1941 (av.)	176,300	1,880	93,090	52.8
1947	238,970	2,690	124,180	52.0
1948	140,880	2,690	63,860	45.3
1949	226,680	2,690	101,160	44.6
1950	161,950	2,690	77,570	47.9
Apricots				
1937-1941 (av.)	216,400	1,700	17,540	8.1
1947	169,000	1,700	20,700	12.2
1948	193,000	1,700	20,900	10.8
1949	160,000	1,700	19,900[a]	12.4
1950	213,000	1,700	25,800[a]	12.1
Figs				
1937-1941 (av.)	104,280	170	6,170	5.9
1947	130,000	200	2,700	2.1
1948	102,900	200	3,000	2.9
1949	93,200	200	3,600	3.9
1950	84,200	200	3,300	3.9
Grapes				
1937-1941 (av.)	2,402,000	3,400	531,840	22.1
1947	2,836,000	2,700	619,200	21.8
1948	2,891,000	2,700	543,800	18.8
1949	2,473,000	2,700	520,200	21.0
1950	2,433,000	2,700	497,700	20.5
Peaches				
1937-1941 (av.)	556,800	3,290	90,480	16.3
1947	784,000	3,300	129,600	16.5
1948	720,000	3,300	119,600	16.6
1949	748,000	3,300	131,700	17.6
1950	662,000	3,300	134,200	20.3
Pears				
1937-1941 (av.)	233,810	1,300	114,530	49.0
1947	345,000	1,300	128,600	37.3
1948	256,000	1,300	53,000	20.7
1949	364,000	1,300	154,600	42.5
1950	340,000	1,300	102,900	30.3

a/ Includes some quantities used for jam and nectar.

Source: U.S. Bureau of Agricultural Economics. Fruits (Noncitrus), Production, Farm Disposition, and Utilization of Sales, 1899-1944, Washington, D.C., May 1948. Also, annual issues bearing same title for succeeding years, July 1949, June 1950, and July 1951.

TABLE 14

Production and Value of Citrus Fruits Produced in California, Average 1937-38 to 1941-42, Annual 1946-47 to 1949-50

	Bearing acreage for all uses	Total production for all uses	Fresh shipments		Other than fresh shipments all uses		On-tree farm value
			Total	Per cent of total production	Total	Per cent of total production	
	1,000 acres	1,000 boxes		per cent	1,000 boxes	per cent	1,000 dollars
Oranges[a/]							
Av. 1937-38 to 1941-42	228.1	47,400	40,620	85.7	4,820	14.3	47,700
1946-47	240.2	57,500	43,000	74.8	14,500	25.2	76,400
1947-48	239.4	46,600	36,000	77.3	10,600	22.7	65,300
1948-49	239.2	37,700	23,900	63.4	13,800	36.6	57,000
1949-50	215.6	42,900	28,400	66.2	14,500	33.8	58,800
Lemons							
Av. 1937-38 to 1941-42	51.3	12,260	8,140	66.4	4,160	33.6	13,800
1946-47	66.6	13,800	9,400	68.1	4,400	31.9	27,600
1947-48	64.9	12,900	8,500	65.9	4,400	34.1	24,100
1948-49	64.7	10,000	7,800	78.0	2,200	22.0	34,400
1949-50	58.2	11,400	7,600	66.7	3,800	33.3	29,800
Grapefruit							
California summer							
Av. 1937-38 to 1941-42	8.3	1,180	1,100	93.2	80	6.8	970
1946-47	9.5	1,900	1,400	73.7	500	26.3	2,360
1947-48	9.5	1,500	1,100	73.3	400	26.7	1,250
1948-49	9.4	1,300	1,100	84.6	200	15.4	2,000
1949-50	7.2	1,400	1,200	85.7	200	15.3	1,570
Calif.-Ariz. desert							
Av. 1937-38 to 1941-42	21.4	3,900	2,940	75.4	960	24.6	1,170
1946-47	18.0	5,300	2,600	49.1	2,700	50.9	1,540
1947-48	17.0	3,900	2,000	51.3	1,900	48.7	1,870
1948-49	14.1	2,700	1,300	48.1	1,400	51.9	1,490
1949-50	12.8	4,500	1,300	28.9	3,200	71.1	2,750

a/ Includes small quantities of Arizona oranges (less than 2 per cent of total).

Source: California Fruit Growers Exchange, Marketing Research Department. Statistical Information on the Citrus Fruit Industry, May 1951.

TABLE 15

California and United States: Citrus Acreage, Production, and On-Tree Farm Value

	Bearing acreage for all uses			Total production for all uses			On-tree farm value		
	Total United States	California	California acreage as per cent of total United States	Total United States	California	California production as per cent of total United States	Total United States	California	California value as per cent of total United States
	1,000 acres		per cent	1,000 boxes		per cent	1,000 dollars		per cent
Oranges									
Av. 1937-38 to 1941-42	486.8	228.1	46.9	79,800	47,400[a]	59.4	72,600	47,700[a]	65.7
1946-47	554.7	240.2	43.3	118,600	57,500[a]	48.5	148,300	76,400[a]	51.5
1947-48	567.7	239.4	42.2	114,500	46,600[a]	40.7	115,600	65,300[a]	56.5
1948-49	582.4	239.2	41.1	104,100	37,700[a]	36.2	152,000	57,000[a]	37.5
1949-50	565.9	215.6	38.1	108,500	42,900[a]	39.5	199,600	58,800[a]	29.5
Lemons[b]									
Av. 1937-38 to 1941-42	51.3	51.3	100.0	12,300	12,300	100.0	13,800	13,800	100.0
1946-47	66.6	66.6	100.0	13,800	13,800	100.0	27,600	27,600	100.0
1947-48	64.9	64.9	100.0	12,900	12,900	100.0	24,100	24,100	100.0
1948-49	64.7	64.7	100.0	10,000	10,000	100.0	34,400	34,400	100.0
1949-50	58.2	58.2	100.0	11,400	11,400	100.0	29,800	29,800	100.0
Grapefruit									
Av. 1937-38	190.0	29.7[c]	15.6	38,600	5,100[c]	13.2	15,100	1,500[c]	9.9
1946-47	198.5	27.5[c]	13.9	59,500	7,200[c]	12.1	40,500	2,100[c]	5.2
1947-48	200.0	26.5[c]	13.3	61,600	5,400[c]	8.8	20,300	2,600[c]	12.8
1948-49	200.5	23.5[c]	11.7	45,500	4,000[c]	8.8	29,600	2,200[c]	7.4
1949-50	176.0	20.0[c]	11.4	36,500	5,900[c]	16.2	59,500	8,300	13.9

a/ Includes small quantities of Arizona oranges.

b/ Almost all lemons in the United States are raised in California with the exception of a very small amount raised in Arizona.

c/ About 45 per cent of acreage reported is in Arizona.

Sources: California Fruit Growers Exchange, Marketing Research Department. Statistical Information on the Citrus Fruit Industry, May 1951. U.S. Bureau of Agricultural Economics. Fruit and Nut Prices, Prices Received by Growers for Fruit and Nut Crops by Type of Sale and Utilization Groups, 1909-46, Washington, D.C., January 1945, Revised and Enlarged Oct. 1947. U.S. Bureau of Agricultural Economics. Agricultural Prices. Washington, D.C., Oct. 27, 1950 and Jan. 30, 1951.

TABLE 16

Fruits, Tree Nuts and Truck Crops for Fresh Market, California Production as Per Cent of United States Total Production (1937-1941, 1947, and 1948)

	1937-1941 average	1947	1948
	per cent		
Citrus fruits[a]			
Oranges	60.7	47.0	41.3
Lemons	100.0	100.0	100.0
Grapefruit	8.4	5.2	4.6
Tree nuts			
Walnuts	91.7	90.8	87.3
Almonds	100.0	100.0	100.0
Fruits (noncitrus)			
Apples	6.1	9.8	6.6
Apricots	92.4	83.7	88.7
Avocados	85.7	90.5	81.2
Cherries	14.8	16.3	11.2
Figs (fresh basis)	98.1	99.2	99.0
Grapes	92.1	93.4	93.9
Olives	100.0	100.0	100.0
Peaches	37.9	40.1	46.1
Pears	32.6	39.7	40.5
Plums	93.2	94.9	95.7
Prunes	81.3	84.2	83.6
Other[b]	100.0	100.0	100.0
Truck crops for fresh market			
Artichokes	100.0	100.0	100.0
Asparagus	38.7	47.3	37.2
Snap beans	10.9	9.0	8.7
Cabbage	6.2	6.7	7.2
Cantaloupes	38.5	48.6	45.6
Carrots	46.9	39.2	39.2
Cauliflower	52.7	55.7	55.6
Celery	35.2	47.5	46.6
Cucumbers	11.4	10.0	9.7
Garlic	84.0	88.8	86.2
Honeyball melons	98.0	100.0	100.0
Honeydew melons	68.3	70.7	58.2
Lettuce	65.1	65.9	63.4
Onions	8.1	12.2	11.3
Green peas	48.8	51.4	50.0
Green peppers	12.5	13.8	11.0
Spinach	11.6	12.3	13.1
Strawberries	7.4	9.1	10.5
Tomatoes	18.0	22.5	22.9
Watermelons	15.3	12.8	13.4

(Continued on next page.)

[illegible] Tax Data and Their Uses for Trend Analysis,
Selected Principles of Tax Use in United States
Fiscal Transition: 1940-1960, and 1961

[illegible]	1940-1961		
	[illegible]	[illegible]	[illegible]
	[illegible]		
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[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

a/ Citrus data are for the crop years: 1937-38 through 1941-42 average; 1946-47; and 1947-48.

b/ Includes dates, pomegranates, pineapple and persimmons.

Sources: Based on data in following sources:
Citrus--U.S. Bureau of Agricultural Economics. "Citrus Fruits." Acreage, Production, Farm Disposition, Value and Utilization of Sales. Crop Seasons 1946-47 and 1947-48; and U.S. Bureau of Agricultural Economics. "Citrus Fruits." Acreage, Production and Farm Disposition, Value and Utilization of Sales. Crop Seasons 1909-1944.

Tree Nuts--U.S. Bureau of Agricultural Economics. Tree Nuts, Acreage, Production, Farm Disposition, Value and Utilization of Sales 1909-1945; and U.S. Bureau of Agricultural Economics. Tree Nuts, Acreage, Production, Farm Disposition, Value, and Utilization of Sales, 1947-48.

Fruits (Noncitrus)--U.S. Bureau of Agricultural Economics. "Fruits (Noncitrus)." Production, Farm Disposition, Value, and Utilization of Sales, 1899-1944; and U.S. Bureau of Agricultural Economics. "Fruits (Noncitrus)." Production, Farm Disposition, Value, and Utilization of Sales, 1947 and 1948.

Truck Crops for Fresh Market--U.S. Bureau of Agricultural Economics. Commercial Truck Crops. Truck Crops for Fresh Market.

TABLE 17

United States: Approximate Consumption of Food Per Capita, Retail-Weight Equivalent, By Major Food Groups; Total in Pounds and in Comparison With 1935-1939 Average

Year	Dairy products excluding butter a/	Eggs b/	Meats, poultry and fish c/	Fats and oils including fat cuts and butter d/	Dry beans and peas, nuts, soya products e/	Potatoes and sweet Potatoes f/	Citrus fruit and tomatoes f/	Leafy green and yellow vegetables f/	Other vegetables and fruit f/	Grain products	Sugar and syrups g/	Coffee, tea and cocoa h/	Total	
													Retail weight equivalent	Index 1935-1939=100 i/
	pounds													
1909	388	35	161	59	10	204	44	76	209	296	84	10	1,576	104
1914	371	36	148	61	10	171	52	72	222	285	90	10	1,528	101
1919	380	36	148	61	10	169	52	76	202	268	104	13	1,519	100
1924	381	39	153	65	13	164	63	84	218	237	115	13	1,545	102
1929	387	40	140	67	14	165	68	92	217	234	112	14	1,550	102
1934	375	35	149	66	15	152	68	93	198	205	109	13	1,478	97
1939	391	38	142	68	16	132	98	104	234	200	113	17	1,553	102
1944	458	42	168	66	16	140	115	122	225	191	108	16	1,667	110
1945	471	48	166	60	17	138	118	133	237	200	92	17	1,697	112
1946	470	45	168	64	18	138	114	129	253	193	92	20	1,704	112
1947	444	46	168	65	14	132	113	113	239	174	110	18	1,636	108
1948	432	47	158	65	15	118	106	117	237	171	106	19	1,591	105
1949 j/	429	46	159	65	16	116	98	111	235	173	106	19	1,573	104

a/ Sum of approximate retail weights of individual products. b/ Allows for breakage from farm to retail.
c/ Excludes bacon and other fat pork cuts. Includes edible offal, game, and small quantity of noncommercial fish.
d/ Includes butter. Actual weight except for "other edible fats and oils." e/ Nuts on a shelled basis.
f/ Including fresh and processed items and produce of town and city gardens.
g/ Excluding use in condensed milk, processed fruits and vegetables.
h/ Includes coffee on roasted basis, and chocolate liquor equivalent of cocoa and chocolate products.
i/ Average for 1935-1939 is approximately 1,518 pounds. j/ Preliminary.

Source: U.S. Bureau of Agricultural Economics. Supplement for 1949 to Consumption of Food in the United States, 1909-48, Civilian Consumption Only, 1941-49. Washington, D.C., 1949.

TABLE 18

United States: Nutrients Available for Consumption Per Capita Per Day, Selected Years, 1909-1949

Year	Food energy	Protein	Fat	Carbo-hydrate	Calcium	Iron	Vitamin A value	Thiamine	Ribo-flavin	Niacin	Ascorbic acid
	index numbers: 1935-1949=100										
1909	107	113	95	113	91	107	94	113	100	114	91
1914	106	110	95	112	89	104	88	109	95	105	87
1919	105	108	98	111	91	108	99	106	99	107	87
1924	106	108	102	109	94	104	89	109	99	105	95
1929	105	106	103	109	97	101	98	108	101	103	97
1934	100	101	100	99	96	100	99	102	98	102	96
1939	102	102	105	101	102	101	102	105	103	102	105
1944	103	112	108	100	113	133	115	148	133	138	117
1945	102	116	106	97	119	135	121	146	137	140	121
1946	103	117	111	97	122	137	117	152	139	140	119
1947	102	109	108	95	115	127	109	137	130	130	112
1948	99	106	108	93	112	121	106	135	126	125	109
1949	99	106	107	94	112	125	105	134	126	125	104

Source: U.S. Bureau of Agricultural Economics. Supplement for 1949 to Consumption of Food in the United States 1909-48. Washington, D.C., 1949.